ECOLOGY'S LOW CARBON FUEL STANDARD (LCFS) EVALUATION AND RECOMMENDATIONS
OVERVIEW, SEP 2, 2009

THE EXECUTIVE ORDER:

- Summary: In consultation with the Departments of Commerce and Transportation and with consideration of stakeholder input, Ecology will assess various lower carbon fuel programs and policies, assess how those options would align with Washington's transportation fuel supply conditions, and recommend a low carbon fuel approach that best fits Washington.

THE LCFS CONCEPT:

- In the California model, an LCFS requires the carbon intensity of transportation fuels to be 10% less over ten years.
- The carbon intensity of petroleum fuels is lowered by blending it with lower-carbon biofuels or by having credits obtained from the charging of electric vehicles or use of CNG fuel and vehicles.
- The carbon intensity is calculated on a life-cycle basis, not just the direct fuel usage.

PROCESS OVERVIEW:

- An LCFS is complicated. ECY will rely heavily on work in California, Northeast states, Midwest states, and EPA.
- The evaluation process is centered on a series of workshops intended to provide for an open dialogue and information exchange with interested parties on the many complex topics. Further consultations can occur as needed.
- Draft recommendations will also be the subject of a workshop before being finalized.

REPORT OVERVIEW:

- The focus of the report will be recommendations on whether to pursue a state LCFS, the best structure and policies for a Washington LCFS, and the next steps for implementing an LCFS if recommended. It may also consider alternative approaches to reducing carbon in transportation fuels as identified in the workshop process.
- The recommendations will address major LCFS issues including: the carbon reduction target and schedule, the baseline fuels, the approach to life-cycle analysis and indirect land-use, Washington carbon intensity values for major alternative fuels, potential compliance scenarios, economic effects, and significant administrative issues.

RECOMMENDATIONS

- Ecology is in the process of retaining a consultant to assist with the analysis and recommendations.
- Ecology has formed a steering committee with DOT and Commerce to help guide the analysis, workshops and recommendations.
- Ecology will consider partner and stakeholder input when making draft and final recommendations.
- Ecology may seek assistance from other agencies such as Agriculture, Licensing, WSU, and U.W.
- Ecology is actively coordinating with Oregon and considering LCFS work being done by other states.

LCFS EVALUATION WORKSHOP SCHEDULE AND TOPICS

DATE	TOPICS
September 25 1. 1 hr 2. 1 hr 3. 2 hrs	**Workshop I: Overall approach and scope of LCFS evaluation** Presentations: 1. Review climate policy background, E.O. task, workplan and evaluation process 2. Overview of what a LCFS is 3. Ecology's approach to methodologies (e.g. life cycle analysis, GREET, indirect land use) 4. Review major evaluation topics: baseline, pathways, carbon intensities, compliance scenarios, economic impact, etc Comment: 5. Stakeholder comments on workplan, process, and methodology. Stakeholders encouraged to present their: (issues, constraints, benefits, challenges, data, studies, etc)
October 23 1. .5 hr 2. .5 hr 3. .5 hr 4. .5 hr 5. 3 hr	**Workshop II: Understanding Baseline fuels & WA economic impacts** Presentations: 1. What Fuels to include in LCFS (on-road, non-road, rail, marine, air) 2. Gasoline and diesel baseline pathways and carbon intensities, including tar sand feedstock questions 3. Most promising alternative fuel pathways for WA 4. Scoping of WA economic impacts – potential benefits, potential costs Comment/discussion: 5. Stakeholder comments, suggestions, data, existing studies on these topics
November 24 1. .5 2. .5 3. .5 4. 3.5 hrs	**Workshop III: Understanding ethanol pathways, near, mid, and long-term** Presentations: 1. Near term ethanol pathways and carbon intensities – large volume pathways e.g. Midwest corn based, CA exports 2. Mid-term ethanol pathways and carbon intensities -- lower CI pathways e.g. Brazilian ethanol, cellulosic ethanol 3. Long-term advanced ethanol pathways e.g. biobutanol, algae, waste streams to ethanol, etc. Comment/discussion: 4. Stakeholder comments, suggestions, data, existing studies on these topics
January 19 1. .5 2. .5 3. .5 4. 3.5 hrs	**Workshop IV: Understanding biodiesel pathways, near, mid, and long-term** Presentations: 1. Near term biodiesel pathways and carbon intensities – soy, grease, others 2. NW biodiesel pathways and carbon intensities – canola, camelina, others 3. Mid and long-term biodiesel pathways – algae, waste streams, others Comment/discussion: 4. Stakeholder comments, suggestions, data, existing studies on these topics

March 25 1. .5 2. .5 3. .5 4. 3.5 hrs	**Workshop V: Understanding electricity, CNG, other pathways** <u>Presentations:</u> 1. Electricity pathways and carbon intensities 2. CNG pathways and carbon intensities 3. Hydrogen or other pathways and carbon intensities <u>Comment/discussion:</u> 4. Stakeholder comments, suggestions, data, existing studies on these topics
May 18 1. .5 2. .5 3. .5 4. 3.5 hrs	**Workshop VI: Follow-ups on pathways and intensities, the regulatory framework** <u>Presentations:</u> 1. Remaining issues on pathways, intensities 2. Goal and timetable for carbon reductions, e.g. 10% in 10 years, or ? 3. Potential compliance scenarios and economic analysis <u>Comment/discussion:</u> 4. Stakeholder comments, suggestions, data, existing studies on these topics
June 17 1. 1 hr 2. 4 hours	**Workshop VII: Review of draft report** <u>Presentations:</u> 1. Summary of draft report recommendations and key issues <u>Comment/discussion:</u> 2. Stakeholder comments